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H. Wong 1367 Editorial

INSTABILITY AND RELIABILITY

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S. Nakajima', T. Ueki, Y. Shionoya, K. Mafune, N. Kuji, S. Nakamura, Y. Komine and T. Takeda 1369 Current status of failure analysis for ULSIs

G. Groeseneken and H. E. Maes 1379 Basics and applications of charge pumping in submicron MOSFETs

Research Papers

S.-C. Wong, M.-S. Huang, C.-Y. Sun and L.-M. Liu 1391 A phenomenon of charge trapping saturation induced by rapid thermal annealing

K.-C. Leong, P.-C. Liu, K.-S. Yeo, C.-H. Gan, G. Qian, Y.-M. Lee and L. Chan 1401 Comparison of latchup immunity for silicided source/drain at different n^+ implant energy

M. Q. Huang, P. T. Lai, J. P. Xu, S. H. Zeng, G. Q. Li and Y. C. Cheng 1407 Suppression of hot-electron-induced interface degradation in metal-oxide-semiconductor devices by backsurface argon bombardment

PHENOMENA OF GATE DIELECTRIC BREAKDOWN

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L. Huang, P. T. Lai, J. P. Xu and Y. C. Cheng 1425 Mechanism analysis of gate-induced drain leakage in off-state n-MOSFET

H. Wong and M. C. Poon 1433 Study of MOS gate dielectric breakdown due to drain avalanche breakdown

C. L. Cha, E. F. Chor, H. Gong, A. Q. Zhang, L. Chan and J. Xie 1439 Evaluation of the dielectric breakdown of reoxidized nitrided oxide (ONO) in flash memory devices using constant current-stressing technique

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W.-I. Zhang and Z.-I. Yang 1465 A new threshold voltage model for deep-submicron MOSFETs with nonuniform substrate dopings

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B. L. Yang, E. C. Jones, N. W. Cheung, J. Shao, H. Wong and Y. C. Cheng 1489 n^+/p ultra-shallow junction formation with plasma immersion ion implantation

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M. C. Poon, M. Chan, W. Q. Zhang, F. Deng and S. S. Lau 1499 Stability of NiSi in boron-doped polysilicon lines

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P. Salome, C. Leroux, D. Mariolle, D. Lafond, J. P. Chante, P. Crevel and G. Reimbold — 1763 — An attempt to explain thermally induced soft failures during low level ESD stresses: study of the differences between soft and hard NMOS failures

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P. McCluskey, F. Lilie, O. Beysser and A. Gallo — 1829 — Low temperature delamination of plastic encapsulated microcircuits

Y. Z. Wang and O. O. Awadelkarim — 1835 — The effects of SiO_2 barrier between active layer and substrate on the performance and reliability of polycrystalline silicon thin film transistors

D. M. Mechtel, H. K. Charles Jr. and A. S. Francomacaro — 1847 — Laser-based electro-optic testing of multichip module structures

D. Rowlands, S. Dimitrijev and H. B. Harrison — 1855 — The effects of process induced gate-to-source/drain junction separation in MOSFET structures

A. Ortiz-Conde, J. J. Liou, F. J. García Sánchez, E. Gouveia Fernandes, O. Montilla Castillo, M. D. Rofiqul Hassan and G. De Mercato — 1867 — A new method for extracting the effective channel length of MOSFETs

Y. F. Hsieh and B. Y. Tsui — 1871 — Design rule related defects formation

Zs. Kohári, V. Székely, M. Rencz, A. Páhl, V. Dudek and B. Höfflinger — 1881 — Studies on the heat removal features of stacked SOI structures with a dedicated field solver program (SUNRED)

A. Dziedzic, A. Magiera and R. Wiśniewski — 1893 — Hydrostatic high pressure studies of polymer thick-film resistors

A. G. M. Strollo and E. Napoli — 1899 — Power rectifier model including self heating effects

C.-K. Song, D.-Y. Kim, P.-J. Choi, J.-H. Choi and D.-H. Kim	1907	Degradation of AlGaAs/GaAs HBTs induced by hot carriers
J. Horan and C. Lyden	1913	Rapid IC performance yield and distribution prediction using a rotation of the circuit parameter principals components
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T. Lee, J. Lee and I. Jung	1941	Finite element analysis for solder ball failures in chip scale package
E. Suhir and J. D. Weld	1949	Application of a 'surrogate' layer for lower bending stress in a vulnerable material of a tri-material body
C. Thomas, S. Haldar, M. Khanna, S. Rajesh, K. K. Gupta and R. S. Gupta	1955	Cut off frequency and transit time analysis of lightly doped drain (LDD) MOSFETs
M. A. Manzoul	1963	Multi-function protective relay on FPGA
P. Samanta and C. K. Sarkar	1969	New positive charge trapping dynamics in SiO_2 gate oxide, based on bulk impact ionization processes under Fowler–Nordheim stress
	1975	Book reviews
	1979	Contents of Volume 38
	1993	Author Index to Volume 38